Employing a Flipped Classroom Approach to Support Project-Based Learning

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Abstract : Findings on a research study conducted for a group of year-2 engineering students participating in a flipped classroom (FC) experience that is judiciously incorporated into project-based learning (PBL) module are presented. The chief purpose of the research is to identify whether if the incorporation of flipped classroom approach to project-based learning indeed yields a positive learning experience for engineering students. Results are presented and compared from the two classes of students – one is subjected to a traditional PBL learning mode while the other undergoes a hybrid PBL-FC learning format. Some themes related to active learning, problem-solving ability, teacher as facilitator, and degree of self-efficacy are also discussed. This paper hopes to provide new knowledge and insights relating to the introduction of flipped classroom learning to a project-based engineering module. Some potential study limitations and future directions to address them are also presented.

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